

Amendment
Serial No. 09/243,269
Page 7

Claims 1-27 have been cancelled and new claims 28-52 have been added, not in response to prior art, but to place the claims in condition for allowance as per the Examiner's suggestions via our telephone conversation of November 7, 2002 and the Examiner's suggestions in the Office Action dated July 29, 2002, stating that claims 16-17, and 26-27 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. New independent claims 28 and 48 contain at least the allowable subject matter that the Examiner pointed out would be patentable in claims 16-17 and 26-27.

The Applicant would like to thank the Examiner for his suggestions regarding the allowable subject matter of claims 16-17 and 26-27.

In view of the above amendments and the following discussion, the Applicant submits that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. §102 or obvious under the provisions of 35 U.S.C. §103. Furthermore, the Applicant also submits that these claims now satisfy the requirements of 35 U.S.C. § 112. Thus, the Applicant believes that all of the claims are now in allowable form.

Rejections

A. 35 U.S.C. § 112

The Examiner has rejected claims 26-27 under the provisions of the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically the Examiner notes that claim 26 recites the limitation "a first, east or west port" in line 3.

The Applicant has cancelled claims 26-27. As such, the Applicant submits that the basis for the Examiner's rejection has been removed. Therefore, the Applicant respectfully requests that the Examiner's rejection be withdrawn.

Amendment
Serial No. 09/243,269
Page 8

Furthermore, the Applicant's new claims 28-52 do not recite the alleged indefinite "a first, east or west port".

B. 35 U.S.C. § 102

The Examiner rejected claims 1-3 and 7-10 under 35 U.S.C. 102(b) as being anticipated by Judd et al. (United States patent 5,465,251 issued November 7, 1995). The rejection is respectfully traversed.

The Applicant has cancelled claims 1-3 and 7-10. As such, the Applicant submits that the basis for the Examiner's rejections has been removed. Therefore, the Applicant respectfully requests that the Examiner's rejections be withdrawn.

Furthermore, the Applicant submits that Judd et al. does not anticipate new claims 28-52.

The Examiner alleges that Judd et al. discloses a network comprising plurality of ports and path connecting two ports and a link identifier configured to transmit a port identification message through the path. The Examiner further alleges that Judd et al. discloses messages converge on an agreed identification and initiating message responsive to port modification.

The Examiner does concede though that Judd et al. fails to disclose that a predetermined value (successive network device's perception of the network link) is obtained by receiving a second message from the other port as recited in at least the Applicant's claim 1 as follows:

"A telecommunications network, comprising:
at least two network devices;
a communications path connecting each of said at least two network devices ; and
at least one controller in communication with said at least two network devices, said at least one controller configured to perform the steps of:
detecting a network modification within said telecommunications network;

Amendment
Serial No. 09/243,269
Page 9

causing at least one of said network devices to transmit a first port identification message to a successive network device in said communications path, said port identification message including information regarding said at least one network device's perception of the network link;

receiving a second port identification message from said successive network device, said second port identification message including information regarding said successive network device's perception of the network link;

comparing said at least one network device's perception of the network link with said successive network device's perception of the network link; and

updating, if said at least one network device's perception of the network link does not agree with said successive network device's perception of the network link, said at least one network device's perception of the network link to agree with said successive network device's perception of the network link."
(emphasis added)

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

As conceded by the Examiner, there is absolutely no teaching or disclosure in Judd et al. for "updating, if said at least one network device's perception of the network link does not agree with said successive network device's perception of the network link, said at least one network device's perception of the network link to agree with said successive network device's perception of the network link" as claimed in the Applicant's new claim 28.

Therefore, the Applicant submits that new claim 28 is not anticipated by the teachings of Judd et al. and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, Independent claim 48 recites similar relevant features as recited in claim 1. As such, the Applicant submits that independent claim 48 is not anticipated by the teachings of Judd et al. and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Amendment
Serial No. 09/243,269
Page 10

Furthermore, dependent claims 29-47 and 49-52, depend either directly or indirectly from independent claims 28 and 48 and recite additional features therefor. As such and for at least the reasons set forth above, the Applicant submits that none of these claims are anticipated by the teachings of Judd et al. Therefore the Applicant submits that all these dependent claims also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

C. 35 U.S.C. § 103(a)

The Examiner has rejected claims 4-6, 11-15 and 18-25 16-22 under 35 U.S.C. § 103(a) as being unpatentable over Judd et al. The rejection is respectfully traversed.

The Applicant has cancelled claims 4-6, 11-15 and 18-25 16-22. As such, the Applicant submits that the basis for the Examiner's rejections has been removed. Therefore, the Applicant respectfully requests that the Examiner's rejections be withdrawn.

Furthermore, the Applicant submits that new claims 28-52 are patentable over Judd et al.

The Examiner alleges that Judd et al. disclose a method comprising transmitting a port identification message from a port to another port at the other end of the path including perception of the network link, and comparing perceptions of the two ports of the link.

Judd et al. does not teach or suggest however, at least the invention of the Applicant with respect to new claim 28. There is absolutely not teaching or suggestion in Judd et al. for "updating, if said at least one network device's perception of the network link does not agree with said successive network device's perception of the network link, said at least one network device's perception of the network link to agree with said successive network device's perception of the network link" as claimed in the Applicant's new claim 28. Judd et al. does not teach or suggest that a transmitting network device can update its perception of a network link to agree with a perception of the network link

Amendment
Serial No. 09/243,269
Page 11

received in a port identification message from another network device as claimed in at least the Applicant's new claim 28.

As such, the Applicant respectfully submits that Judd et al. does not teach, suggests or make obvious at least the Applicant's new claim 28. Therefore, the Applicant submits that new claim 28 fully satisfies the requirements of 35 U.S.C § 103 and is patentable thereunder.

Likewise, independent claim 48 recites similar relevant features as recited in claim 28. As such and for at least the reasons stated above, the Applicants submits that independent claim 48 is not obvious under the teachings of Judd et al. and also fully satisfy the requirements of 35 U.S.C. § 103 and is patentable thereunder.

Furthermore, dependent claims 29-47, and 49-52, depend either directly or indirectly from independent claims 28 and 48 and recite additional features therefor. As such and for at least the reasons set forth above, the Applicant submits that none of these claims are obvious under the teachings of Judd et al. Therefore the Applicant submits that all these dependent claims also fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

Conclusion

Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102 or obvious under the provisions of 35 U.S.C. §103. Furthermore, the Applicant also submits that all of these claims also fully satisfy the requirements of 35 U.S.C. § 112. Consequently, the Applicant believes that all of these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, Esq. at (732) 530-

Amendment
Serial No. 09/243,269
Page 12

9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



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Amendment
Serial No. 09/243,269
Page 13

MARKED UP CLAIMS

28. (New) A telecommunications network, comprising:
- at least two network devices;
 - a communications path connecting each of said at least two network devices ; and
 - at least one controller in communication with said at least two network devices, said at least one controller configured to perform the steps of:
 - detecting a network modification within said telecommunications network;
 - causing at least one of said network devices to transmit a first port identification message to a successive network device in said communications path, said port identification message including information regarding said at least one network device's perception of the network link;
 - receiving a second port identification message from said successive network device, said second port identification message including information regarding said successive network device's perception of the network link;
 - comparing said at least one network device's perception of the network link with said successive network device's perception of the network link; and
 - updating, if said at least one network device's perception of the network link does not agree with said successive network device's perception of the network link, said at least one network device's perception of the network link to agree with said successive network device's perception of the network link.
29. (New) The telecommunications network of claim 28, wherein said at least two network devices comprise network ports.
30. (New) The telecommunications network of claim 29, further comprising at least one network element comprising respective ones of said network ports and said network ports are Synchronous Optical Networking (SONET) ports.

Amendment
Serial No. 09/243,269
Page 14

31. (New) The telecommunications network of claim 29, further comprising at least one network element comprising respective ones of said network ports and said network ports are Synchronous Digital Hierarchy (SDH) ports.

32. (New) The telecommunications network of claim 28, wherein said communications path is an optical communications path.

33. (New) The telecommunications network of claim 28, wherein said at least one controller is incorporated within said at least one network device.

34. (New) The telecommunications network of claim 28, wherein at least one controller is incorporated within each of said at least two network devices.

35. (New) The telecommunications network of claim 28, wherein said at least one network device and said successive network device are neighboring devices.

36. (New) The telecommunications network of claim 35, wherein said at least one network device's perception of the network link comprises a device identity of said at least one network device and said successive network device.

37. (New) The telecommunications network of claim 35, wherein said successive network device's perception of the network link comprises a device identity of said successive network device.

38. (New) The telecommunications network of claim 28, wherein said at least one network device is located substantially at a beginning of said communications path and said successive network device is located substantially at an end of said communications path.

Amendment
Serial No. 09/243,269
Page 15

39. (New) The telecommunications network of claim 38, wherein said at least one network device's perception of the network link comprises a device identity of said at least one network device, said successive network device and any intermediate devices.

40. (New) The telecommunications network of claim 38, wherein said successive network device's perception of the network link comprises a device identity of said successive network device and any intermediate devices between said at least one network device and said successive network device.

41. (New) The telecommunications network of claim 28, wherein said network modification comprises an addition of a network device to said telecommunications network.

42. (New) The telecommunications network of claim 28, wherein said network modification comprises a reconfiguration of a network link.

43. (New) The telecommunications network of claim 28, wherein said at least one controller is configured to:

cause each of said at least two network devices to transmit a port identification message to a successive device in said communications path, said port identification message including information regarding each of said at least two network device's perception of the network link.

44. (New) The telecommunications network of claim 43, wherein said at least one controller is further configured to develop a network map by accumulating the network link perceptions of each of said at least two network devices.

Amendment
Serial No. 09/243,269
Page 16

45. (New) The telecommunications network of claim 44, further comprising a provisioning system configured to allocate telecommunications bandwidth in accordance with said network mapping.

46. (New) The telecommunications network of claim 44 further comprising an alarm processing system responsive to network alarms by re-routing communications through the network, said alarm processing system also responsive to the network link perceptions of each of said at least two network devices.

47. (New) The telecommunications network of claim 28, wherein said telecommunications network is a bi-directional line switched ring and each of said at least two network devices is configured to transmit port identification messages to network devices before and after each of said at least two network devices along said communications path.

48. (New) A method for automatic link identification in a telecommunications network comprising at least two network devices and a communications path, comprising;

detecting a network modification within said telecommunications network;

transmitting a first port identification message from at least one of said network devices to a successive network device in said communications path, said port identification message including information regarding said at least one network device's perception of the network link;

receiving a second port identification message from said successive network device, said second port identification message including information regarding said successive network device's perception of the network link;

comparing said at least one network device's perception of the network link with said successive network device's perception of the network link; and

Amendment
Serial No. 09/243,269
Page 17

updating, if said at least one network device's perception of the network link does not agree with said successive network device's perception of the network link, said at least one network device's perception of the network link to agree with said successive network device's perception of the network link.

49. (New) The method of claim 48, wherein each of said at least two network devices is configured to transmit to a successive device in said communications path, a port identification message including information regarding each of said at least two network device's perception of the network link.

50. (New) The method of claim 48, wherein said steps of transmitting and receiving form a logical data link connection between said at least one network device and said successive network device.

51. (New) The method of claim 48, wherein Link Access Protocol-Digital (LAPD) protocol is used for the transmitting of said first and second port identification messages.

52. (New) The method of claim 48, wherein said telecommunications network is a bi-directional line switched ring and each of said at least two network devices is configured to transmit port identification messages to network devices before and after each of said at least two network devices along said communications path.